

Derivatives Management

Scope and Objectives:

- Recent market volatility has highlighted that many tailored derivative trades bank took on were more risky than originally thought.
- Understanding this risk is now crucial for sales people to guide their clients away from trades that will generate too much risk for the bank.
- This one day course aims to improve salespeople's understanding of:
 - Derivative key pricing inputs and which of these are tradable
 - Process of managing derivative trades and books
 - Positions and risks that derivative books take on in the business of trading and hedging
 - Trades that add to or mitigate existing positions in a derivative trading book

Who should attend:

This is a good course for salespeople who are broadly familiar with equity, interest rate and credit derivatives but NOT how they are traded or hedged. An in-depth knowledge of options, tranches and delta hedging is not required.

Topics not included:

- Asset class specifics

The objective of this course is to get participants to understand the risks associated with derivatives and how trading desks manage these risks. As a one-day course, it will not go into asset class specifics in detail as there is not sufficient time for this; however this could be covered for any or all asset classes in follow up courses.

Questionnaire:

Participants in this module should be able to answer these questions:

- How does the PV of one leg of a swap relate to the PV of the other leg?
- Why do you pay a premium to buy an option?
- Will options be cheap or expensive in volatile markets?
- Are you going long or short risk when you buy CDS protection?
- What does correlation mean in credit?

If not, they should take equity, interest rate and credit derivatives courses before doing this course.

If participants are able to answer the following questions, they do not need to take this course:

- What risk does a non-standard maturity trade create for a trading book?
- Is there an arbitrage between historical and implied volatility?
- In what scenarios is delta hedging not sufficient for options?
- In what scenarios is delta hedging not sufficient for credit correlation trades?

Training methodology:

The program will focus on the practical realities of the market, rather than taking an excessively mathematical or academic approach. The course style is discussion and case study based rather than pure lecture, allowing the participants to think through the products themselves and thus gain a more intuitive understanding of the market.

Introduction and review

- Derivatives review
 - Futures/forwards (equities and interest rate)
 - Swaps (interest rate and credit)
 - Options (equity, interest rate and credit)
 - Tranches (credit)

This section will serve as a brief review of derivatives terms, mechanics and usage across asset classes and will allow the trainer to assess the level of derivatives knowledge in the room.

Hedging flow derivatives

- Hedging market standard vs. non-market standard trades
- Hedging alternatives
 - e.g., hedging a swap with Treasuries/futures/swaps
- Basis risk
- Quanto risk

Case study: Trading IRS with a non-standard maturity

(This case study looks at the assumptions traders have to make about the shape of the yield curve, and therefore the basis risks they take on, when trading interest rate swaps with non-standard maturities)

Case study: CDS quanto risk

(This case study examines the quanto risk inherent for a trader in a Euro-denominated CDS on a US Reference Entity)

This section will serve as an overview of the process and risks involved in hedging vanilla derivatives, and the alternatives available to dealers to hedge their derivative trades and books.

Hedging options

- Hedging market standard vs. non-market standard trades
- Delta
- Gamma
- Theta
- Vega

Case study: Delta hedging equity options

(This case study analyzes the process of dynamic delta hedging, thereby introducing the concept of gamma, and discusses what it means to be long vs. short gamma and how to monetize gamma)

This section serves as a brief overview of option sensitivities to the key pricing inputs, focusing more on the intuition behind the sensitivities and using a case study to illustrate the concepts of delta hedging and gamma rather than using models to price options.

Hedging volatility and correlation

- Observable vs. unobservable inputs
- Volatility
 - Historical vs. implied volatility
 - Hedging volatility
 - What does it mean to be long vol? Short vol?
 - Hedging tailored options with standardized/listed options
- Credit correlation
 - Historical vs. implied correlation
 - Hedging correlation
 - How does correlation drive tranche pricing?
 - What does it mean to be long correlation? Short correlation?
 - Hedging bespoke tranches with index tranches

Case study: Historical vs. implied vol arbitrage

(This case study gets participants to think about the concepts of historical and implied volatility and why it is possible for them to be different)

Case study: Hedging volatility

(This case study looks at the alternatives available to a trader to hedge a single name option, and reviews the liquidity vs. perfect hedge trade-off of hedging with single name vs. index options)

Case study: Expressing a view on correlation

(This case study gets participants to think through the tranche trades that are long correlation, and examines the other positions/risks involved in putting on such trades)

Case study: Tranche exposures

(This case study looks at the exposures to a trading book from hedging a bespoke tranche with an index tranche)

This section examines the process and pitfalls of hedging unobservable derivative inputs such as volatility and correlation.

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- B&B was founded in 2004 and is a partnership of experienced and respected financial market professionals who uniquely have recent, relevant market experience
- B&B partners and consultants are experts across asset classes (equity, fixed income, credit, commodities and alternatives) with a focus on structured and exotic products
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 - Over 6,000 course participants and 600 training days since 2004
- We also provide strategic consultancy services, tailored to suit client's individual requirements and specialising in:
 - Structured products across asset classes
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